
PROFESSIONAL VITA
JANET S. DUFEK

Associate Professor
Department of Kinesiology and Nutrition Sciences
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EDUCATION

B.S. (summa cum laude) University of Wisconsin-Superior, Superior, Wisconsin, 1981
Physical Education (major); Health Education (minor)

M.S. Illinois State University, Normal, Illinois, 1982
Physical Education (Scientific Foundations)

Ph.D. University of Oregon, Eugene, Oregon, 1988
Physical Education; Biomechanics (concentration); Integrated Exercise
Science (support area)

PROFESSIONAL EXPERIENCE

2009- present Associate Professor, University of Nevada, Las Vegas, Las Vegas, Nevada

2004 - 2009 Visiting Research Associate Professor, University of Nevada, Las Vegas,
Las Vegas, Nevada

2000 - 2004 Adjunct Associate Professor, University of Nevada-Las Vegas, Las Vegas,
Nevada

1995 - present Research Scientist, Human Performance & Wellness, Inc., Eugene,
Oregon

2001 - 2004 Courtesy Associate Professor, University of Oregon, Eugene, Oregon

1996 - 2000 Courtesy Research Associate, University of Oregon, Eugene, Oregon

1991- present Vice President, BioDynamics Foundation, Eugene, Oregon

1989 - 1996 Assistant Professor, Exercise and Movement Science (Biomechanics);
University of Oregon, Eugene, Oregon

- 1989 Visiting Lecturer, Exercise and Sport Science (Biomechanics); Oregon State University, Corvallis, Oregon
- 1988 - 89 Visiting Assistant Professor, Physical Education and Human Movement Studies (Biomechanics); University of Oregon, Eugene, Oregon
- 1987 - 88 Instructor, Talented and Gifted Summer Education Program, University of Oregon, Eugene, Oregon
- 1984 - 88 Graduate Research Assistant and Teaching Fellow, University of Oregon, Eugene, Oregon
- 1982 - 84 Research Assistant/Video Technician, Olympic Training Center, Colorado Springs, Colorado
- 1981 - 82 Graduate Assistant, Illinois State University, Normal, Illinois
- 1980 - 81 Substitute Teacher, Ashland Public School System, Ashland, Wisconsin

GRANTS and CONTRACTS

Dufek, J.S. Cross-Country Ski In-Boot Forces. The Langer Biomechanics Group, \$455, 1986.

Dufek, J.S. & Bates, B.T. Biomechanical Characteristics of Lower Extremity Function During Walking, Running and a Transition Pace. Rockport Walking Institute, \$2,500, 1988.

Dufek, J.S. Interface of Perturbation and Force Platforms. Faculty Research Grant, University of Oregon, \$100, 1989.

Bates, B.T., **Dufek, J.S.** & Robertson, R.N. Evaluation and Training Proposal: Chain and Webbing Tasks. Bohemia, Inc., (via BioDynamics Foundation), \$850, 1990.

Dufek, J.S. Lower Extremity Modeling During Landings. Faculty Research Grant, University of Oregon, \$100, 1990.

Dufek, J.S. & Bates, B.T. Human Data Collection: Mid- and Final Reach Positions. Renton Boeing, (via BioDynamics Foundation), \$2,500, 1990.

Bates, B.T. & **Dufek, J.S.** Equipment Grant. Precor USA, \$9,500, 1991.

Bates, B.T. & **Dufek, J.S.** Biomechanical Analyses of Barcode Scanning. Spectra-Physics Scanning Systems, Inc., (via BioDynamics Foundation), \$12,750, 1991.

Dufek, J.S. Design and Construction of an Impact Tester Support Stand. Faculty Research Grant, University of Oregon, \$100, 1991.

Dufek, J.S. Professional Travel Grant, National Osteoporosis Foundation, \$500, 1991.

Dufek, J.S. Ariel Performance Analysis Workstation for Undergraduate Laboratories. Williams Professorship Recognition Program for Undergraduate Education, University of Oregon, \$3,975, 1991-92.

Dufek, J.S. & Bates, B.T. Equipment Grant. Ariel Life Systems, Inc., \$73,015, 1991-92.

Bates, B.T. & **Dufek, J.S.** Equipment Grant. Penny & Giles, Inc. and BioDynamics Foundation, \$3,200, 1992.

Bates, B.T. & **Dufek, J.S.** Equipment Grant. Ariel Life Systems, Inc., \$75,000, 1992.

Bates, B.T. & **Dufek, J.S.** Equipment Grant. Tekscan, Inc., \$2,000, 1992.

Bates, B.T. & **Dufek, J.S.** Equipment Evaluation Project. Precor USA and BioDynamics Foundation, \$15,000, 1992.

Bates, B.T. & **Dufek, J.S.** Laboratory General Operating Funds. BioDynamics Foundation, \$4,000, 1992.

Dufek, J.S. & Bates, B.T. Qualitative Analyses of Checker and Checkstand Performance. Spectra-Physics, Inc., (via BioDynamics Foundation), \$1,600, 1992.

Bates, B.T. & **Dufek, J.S.** Equipment Grant. Tekscan, Inc., \$17,500, 1993.

Bates, B.T. & **Dufek, J.S.** Laboratory General Operating Funds. BioDynamics Foundation, \$3,000, 1993.

Bates, B.T. & **Dufek, J.S.** Laboratory General Operating Funds. BioDynamics Foundation, \$1,000, 1994.

Dufek, J.S. Computer Hardware Grant (via BioDynamics Foundation), \$2,115, 1994.

Dufek, J.S. Professional Travel Grant. National Association for Sport and Physical Education, \$700, 1994.

Dufek, J.S. Three-dimensional Coordinate Data: Animation of Sport Movements. Dynamix^R, (via BioDynamics Foundation), \$4,000, 1994.

King, M.J. & **Dufek, J.S.** Carpel Tunnel Syndrome: A Risk Comparison of Three Models of Supermarket Scanners. Spectra-Physics, Inc., \$1080, 1994.

Dufek, J.S. Computer Hardware Grant (via BioDynamics Foundation), \$2,165, 1995.

Dufek, J.S. Professional Travel Grants (2). American Institute of Biological Sciences (via BioReview), \$3,100, 1995.

Dufek, J.S. Biomechanical Evaluation of Lower-Extremity Bracing System. Oregon Orthotic System, Inc., \$6,000, 1995-96.

Dufek, J.S. Professional Travel Grant. United Information Services, \$2,600, 1996.

Dufek, J.S. Biomechanical Evaluation of Hand-Held Scanners. PSC Spectra Physics, Inc., \$9,850, 1996.

Dufek, J.S. Mechanical Evaluation of Women's Walking Shoes. Easy Spirit and LMPM, Inc., \$3,200, 1997.

Dufek, J.S. Mechanical Evaluation of Women's Walking Shoes. Easy Spirit and LMPM, Inc., \$4,320, 1998.

Dufek, J.S. Mechanical Evaluation of Women's Walking Shoes. Easy Spirit and LMPM, Inc., \$14,400, 1998.

Dufek, J.S. Forefoot Evaluation of Women's Dress Pumps. Easy Spirit and LMPM, Inc., \$3,900, 1998.

Dufek, J.S. Bates, B.T. and Mercer, J.A. Evaluation of Shock-Absorbing Running Shoes. Human Performance & Wellness, Inc. and Bio-Dynamics Foundation, \$600, 2005-2006.

Mangus, B.C., **Dufek, J.S.**, Mercer, J.A., Wilson, K. & Krum, L. Etiology of Knee Joint Laxity: Gender Considerations. University of Nevada, Las Vegas Stimulation, Implementation, Transition and Enhancement Award, \$6,355, 2005-2006.

Mercer, J.A., **Dufek, J.S.**, & Mangus, B.C. Effects of Maturation on Impact Attenuation Characteristics During Running in Females. University of Nevada, Las Vegas Center of Excellence in Women's Health, School of Nursing, via the Department of Education, \$15,890, 2005-2006.

Mercer, J.A., Mangus, B.C., Rubley, M.D. & **Dufek, J.S.** Shock Attenuation Characteristics of Children Runners. National Athletic Trainers Association, \$28,517, 2006-2008.

Mercer, J.A. & **Dufek, J.S.** Acquisition and Installation of a Dual Force Platform Mounting System. University of Nevada, Las Vegas, Research Infrastructure Award Program, \$5,295, 2007.

Mercer, J.A., **Dufek, J.S.**, Stergiou, N., Mangus, B.C., Tandy, R.C. & Henry, J. Motion-Capture System Maintenance Award. University of Nevada, Las Vegas, President's Research Award, \$10,000, 2007-2009.

Dufek, J.S. Impact Characteristics of Running Shoes. StrideRite via BioDynamics Foundation, \$1,500, 2007.

Neumann, E.S., **Dufek, J.S.**, O'Toole, B., and Wallmann, H.W. Helios Brace Performance and Production. Hereditary Neuropathy Foundation, Ortho Rehab Designs and University of Nevada, Las Vegas Applied Research Initiative Award, \$131,576, 2008-2010.

Aldridge, J.M., Melcher, G.G., and **Dufek, J.S.** A Retro Locomotion Protocol to Reduce Postural Sway: Implications for Fall Prevention in Older Adults. Bertec Corporation Competitive Equipment Loan Program, \$6,100, 2008-2009.

Dufek, J.S. Acquisition of High Speed Video Camera. BioDynamics Foundation, \$17,343, 2008.

Dufek, J.S. High Speed Videographic Measurement of Footwear. HPW Biomechanics, \$7,000, 2008.

Dufek, J.S. APAS-Mobile Software Grant. Ariel Dynamics, Inc., \$7,000, 2009.

Dufek, J.S. Bertec Balance-Check Screener with Safety Harness Equipment Grant. Bertec Corporation, \$3,500, 2009.

Candela, L., **Dufek, J.S.**, Mercer, J.A. and Putney, L. Translating the Diabetes Prevention Program to Middle and High School Students. School of Nursing/School of Allied Health Sciences Obesity-Related Award, \$30,345, 2009-2010.

Dufek, J.S. Effects of Footwear on Walking Variability. Easy Spirit and HPW Biomechanics, \$3,500, 2010.

Dufek, J.S. Rearfoot Component Impact Characteristics After 200 Miles of Wear. Stanton & Cia, S.A. and HPW Biomechanics, \$500, 2010.

Dufek, J.S. and Hickman, R. Strategic Plan Graduate Research Assistant. Office of Research and Graduate Studies, University of Nevada, Las Vegas. \$36,000, 2010-2013.

Dufek, J.S. and Wallmann, H. Collaborative Research Award, School of Allied Health Sciences, University of Nevada, Las Vegas, (release-time award), 2010.

Dufek, J.S. and Wallmann, H. Backward Walking as a Physical Therapy Intervention to Increase Gait Speed and Improve Balance in Older Adults. Clagett Family Foundation, American Physical Therapy Association, \$287,483, 2010; not funded.

Hickman, R. and **Dufek, J.S.** Effects of High Intensity Training in Children with Cerebral Palsy (HITCH). Foundation for Physical Therapy, Pediatric Research Grant, \$38,382, 2010; not funded.

Lindsey, A., Mercer, J.A., **Dufek, J.S.**, Byington, T. and Sigman-Grant, M. Validation of a Field-Based Evaluation Tool to Measure Physical Activity and Movement in Preschoolers. Agriculture and Food Initiative-Childhood Obesity, USDA-NIFA-AFRI-0003037, \$1,764,437 (UNLV sub-award; \$414,636), 2010; not funded.

Mercer, J.A., **Dufek, J.S.**, Masumoto, K., Tandy, R.D. and Young, D. Role of Muscle Activity during Water Locomotion for Sufferers of Osteoarthritis. National Institutes of Health R03, \$202,234, 2010; not funded.

Ryan-Wenger, N., **Dufek, J.S.**, Hu, J. and Klinich, K. New Paradigm-New Solutions to Minimize Falls & Injuries in Pediatric Environments. National Institutes of Health Investigator-Initiated R01, \$1,111,645, (Dufek sub-award; \$199,348), 2010; not funded.

Ryan-Wenger, N., **Dufek, J.S.**, Hu, J. and Klinich, K. New Paradigm-New Solutions to Minimize Falls & Injuries in Pediatric Environments (revision). National Institutes of Health Investigator-Initiated R01, \$1,117,950, (Dufek sub-award; \$206,464), submitted fall 2010.

Ryan-Wenger, N., **Dufek, J.S.**, Smith, G.A. and Wang, W. Development of a Taxonomy of Human, Environmental, Biomechanical, and System Factors that Contribute to Pediatric Fall-Related Injuries. National Patient Safety Foundation Research Grants Program 2010-2011, \$99,991 (Dufek sub-award: \$36,455), Letter of Intent accepted, November 2010, submitted spring 2011.

Santo, A.S. and **Dufek, J.S.** Interactive Video Gaming: Beneficial to Health or Just Fun? American College of Sports Medicine Foundation Grant, \$9,759, submitted spring 2011.

PUBLICATIONS, Refereed

Dufek, J.S. & Bates, B.T. (1987). Temporal gait characteristics of cross-country skiers. In B. Jonsson (Ed.), Biomechanics X-B (pp. 729-732). Champaign, Illinois: Human Kinetics Publishers.

Pierce, J., Pope, M.H., Renstrom, P., Johnson, R., **Dufek, J.** & Dillman, C. Force measurement in cross-country skiing. *International Journal of Sport Biomechanics*. 1987;3(4):383-391.

Bates, B.T., McCaw, S.T., Simpson, K.J. & **Dufek, J.S.** (1988). Intraday variability of two performer-measurement systems. In G. deGroot, A. Hollander, P. Huijing & G. van Ingen Schenau (Eds.), Biomechanics XI (pp. 1089-1092). Amsterdam, The Netherlands: Free University Press.

Dufek, J.S. & Bates, B.T. The evaluation and prediction of impact forces during landings. *Medicine and Science in Sports and Exercise*. 1990;22(3):370-377.

Dufek, J.S. & Bates, B.T. (1990). Foot pressure and temporal patterns during overground and treadmill walking. In C.O. Dotson & J.H. Humphrey, (Eds.), Exercise Physiology: Current Selected Research (pp. 179-186). New York: AMS Press.

Dufek, J.S., Schot, P.K. & Bates, B.T. Dynamic lower extremity evaluation of males and females during walking and running. *Journal of Human Movement Studies*. 1990;18:159-175.

Dufek, J.S. & Bates, B.T. Biomechanical factors associated with injury during landing in jump sports. *Sports Medicine*. 1991;12(5):326-337.

Dufek, J.S., Bates, B.T., Davis, H.P. and Malone, L.A. Dynamic performance assessment of selected sport shoes on impact forces. *Medicine and Science in Sports and Exercise*. 1991;23(9):1062-1067.

Wiese-Bjornstal, D.M. & **Dufek, J.S.** The effect of weightload and footwear on kinetic and temporal factors in level grade backpacking. *Journal of Human Movement Studies*. 1991;21:167-181.

Bates, B.T., **Dufek, J.S.** & Davis, H.P. The effect of trial size on statistical power. *Medicine and Science in Sports and Exercise*. 1992;24(9):1059-1068.

Dufek, J.S. Jump high...then what? Making landings safe. *Strategies*. 1992;5(7):9-12.

Dufek, J.S. & Bates, B.T. Lower extremity performance models for landing. *Human Movement Science*. 1992;11:299-318.

Marcus, R., Drinkwater, B., Dalsky, G., **Dufek, J.**, Raab, D., Slemenda, C. & Snow-Harter, C. Osteoporosis and exercise in women. *Medicine and Science in Sports and Exercise*. 1992;24(6):S301-S307.

Dufek, J.S., Schot, P.K. & Bates, B.T. Landing performance II: Assessment and future directions. *Medicine, Exercise, Nutrition and Health*. 1993;2:135-142.

James, R. & **Dufek, J.S.** Movement observation: What to watch...and why. *Strategies*. 1993;7(2):17-19.

Schot, P.K. & **Dufek, J.S.** Landing performance I: Kinematic, kinetic and neuromuscular aspects. *Medicine, Exercise, Nutrition and Health*. 1993;2:69-83.

Derrick, T.R., Bates, B.T. & **Dufek, J.S.** Evaluation of time-series data sets using the Pearson product-moment correlation coefficient. *Medicine and Science in Sports and Exercise*. 1994;26(7):919-928.

Schot, P.K., Bates, B.T. & **Dufek, J.S.** Bilateral performance symmetry during drop landing: A kinetic analysis. *Medicine and Science in Sports and Exercise*. 1994;26(9):1153-1159.

Dufek, J.S., Bates, B.T. & Davis, H.P. The effect of trial size and variability on statistical power. *Medicine and Science in Sports and Exercise*. 1995;27(2):288-295.

Dufek, J.S., Bates, B.T., Stergiou, N. & James, C.R. Interactive effects of group and single-subject response patterns. *Human Movement Science*. 1995;14:301-323.

Bates, B.T., Zhang, S., **Dufek, J.S.** & Chen, F.C. The effects of sample size and variability on the correlation coefficient. *Medicine and Science in Sports and Exercise*. 1996;28(3):386-391.

Dufek, J.S. & Zhang, S. Landing models for volleyball players: A longitudinal evaluation. *Journal of Sports Medicine and Physical Fitness*. 1996;36:35-42.

Krasnow, D.H., Chatfield, S.J., Barr, S., Jensen, J.L. & **Dufek, J.S.** Imagery and conditioning practices for dancers. *Dance Research Journal*. 1997;29(1):43-64.

Dufek, J.S., Mercer, J.A., Kosta, C.S. & Fish, D.J. Metabolic cost of walking with a rigid, rotational control ankle foot orthosis. *Journal of Prosthetics and Orthotics*. 1997;9(4):146-150.

Dufek, J.S., Fish, D.J. & Kosta, C.S. Effects of orthotic intervention on lower extremity muscle activity during walking. *Physical Therapy Case Reports*. 1998;1(5):260-263.

Crussemeyer, J.A. & **Dufek, J.S.** (2000). Biomechanics. In B.L. Drinkwater (Ed.), Women in Sport: Olympic Encyclopaedia of Sports Medicine & Science (pp. 93-107). Oxford, England: Blackwell Science.

James, C.R., **Dufek, J.S.**, & Bates, B.T. Effects of injury proneness and task difficulty on joint kinetic variability. *Medicine and Science in Sports and Exercise*. 2000;32(11):1833-1844.

Zhang, S., Bates, B.T. & **Dufek, J.S.** Contributions of lower extremity joints to energy dissipation during landings from different heights with different stiffnesses. *Medicine and Science in Sports and Exercise*. 2000;32(4):812-819.

Mercer, J.A., **Dufek, J.S.** & Bates, B.T. Analysis of peak oxygen consumption and heart rate during elliptical and treadmill exercise. *Journal of Sport Rehabilitation*. 2001;10(1):48-56.

Dufek, J.S. Exercise variability: A prescription for overuse injury prevention. *Health and Fitness Journal*. 2002;6(4):18-23.

James, C.R., Bates, B.T., & **Dufek, J.S.** Classification and comparison of biomechanical response strategies for accommodating landing impact. *Journal of Applied Biomechanics*. 2003;19:106-118.

Bates, B.T., James, C.R. & **Dufek, J.S.** (2003). Single subject analysis. In N. Stergiou (Ed.), Innovative Analyses of Human Movement (pp. 3-28). Champaign, IL: Human Kinetics.

Mercer, J.A., Bates, B.T., **Dufek, J.S.** & Hreljac, A. Characteristics of shock attenuation during fatigued running. *Journal of Sport Science*. 2003;21:911-919.

James, C.R., **Dufek, J.S.**, & Bates, B.T. Effects of stretch shortening-cycle exercise fatigue on overuse injury risk during landing. *Research Quarterly for Exercise and Sport*. 2006; 77(1):1-13.

Tritsch, A.J., Mangus, B.C., **Dufek, J.S.**, Orzechowski, K.A. & Mercer, J.A. Application of isokinetic strength to dynamic performance for female athletes. *Journal of Athletic Training Supplemental*. 2006;41(2):S100.

James, C.R., Herman, J.H., **Dufek, J.S.** & Bates, B.T. Number of trials necessary to achieve performance stability of selected ground reaction force variables during landing. *Journal of Sports Science and Medicine*. 2007;6:126-134.

Tritsch, A.J., Rubley, M.D., **Dufek, J.S.**, Mercer, J.A., Neumann, E.S. Tibial rotation and valgus movement at the knee during cutting and stopping. *Journal of Athletic Training Supplemental*. 2007;42(2):S81.

Wulf, G., Zachry, T., Granados, C. & **Dufek, J.S.** Increase in jump-and-reach height through an external focus of attention. *International Journal of Sports Science and Coaching*. 2007;2(3):275-284.

Dufek, J.S., Mercer, J.A., Teramoto, K., Mangus, B.C. & Freedman, J.A. Impact attenuation and variability during running in females: A lifespan investigation. *Journal of Sport Rehabilitation*. 2008;17:230-242.

Dufek, J.S., Mercer, J.A. & Griffin, J.R. The effects of speed and surface compliance on shock attenuation characteristics for male and female runners. *Journal of Applied Biomechanics*. 2009;25:219-228.

Wulf, G. & **Dufek, J.S.** Increased jump height with an internal focus is due to enhanced lower extremity joint kinetics. *Journal of Motor Behavior*. 2009;41(5):401-409.

Mercer, J.A., **Dufek, J.S.**, Mangus, B.C., Rubley, M.R., Bhanot, K. & Aldridge, J.A. A description of shock attenuation for children running. *Journal of Athletic Training*. 2010;45(3):259-264.

Wulf, G., **Dufek, J.S.**, Lozano, L. & Pettigrew, C. Increased jump height and reduced EMG activity with an external focus of attention. *Human Movement Science*. 2010;29:440-448.

Liebenberg, J., Scharf, J., Forrest, D., **Dufek, J.S.**, Masumoto, K., & Mercer, J.A. Determination of muscle activity during running at reduced body weight. *Journal of Sports Sciences*. 2011;29:207-214, doi 10.1080/02640414.2010.534806.

Dufek, J.S., House, A.J., Mangus, B.C., Melcher, G.G. & Mercer, J.A. Backward Walking: A Possible Active Exercise for Low Back Pain Reduction and Enhanced Function in Athletes. *Journal of Exercise Physiology online*. 2011;14:1-9 (in press, 2011).

Forest, D.M., **Dufek, J.S.** and Mercer, J.A. Impact characteristics of children running in adult sized shoes. *Journal of Applied Biomechanics*. (submitted).

Whitley, C.R. & **Dufek, J.S.** The effect of retro-walking on hamstring flexibility and low back range of motion. *International Journal of Exercise*. (submitted).

PUBLICATIONS, Extended Abstracts and Non-Refereed

Dillman, C.J. & **Dufek, J.S.** (1983). A comparative analysis between roller and on-snow skiing. Ski Coach, 6(4), 4-8, 17.

Dufek, J.S. & Fenton, R.M. (1984). Electrodynamogram force analysis in cross-country skiing: A preliminary investigation. In J. Terauds, K. Barthels, E. Kreighbaum, R. Mann and J. Crakes (Eds.), Sports Biomechanics (pp. 227-230). Del Mar, California: Academic Publishers.

Dillman, C.J., **Dufek, J.S.** & Cheetham, P.J. (1984). Body stability and performance in archery. U.S. Archer, 3(1), 38-41.

Dufek, J.S., Wiese, D.M. & Bates, B.T. (1987). The effect of velocity on in-boot forces for the cross-country ski diagonal stride. Proceedings of the 11th Annual American Society of Biomechanics, (pp. 165-166). University of California-Davis.

McCaw, S.T., Bates, B.T. & **Dufek, J.S.** (1988). Interday variability of ground reaction force symmetry. Human Locomotion V, Proceedings of the Fifth Biennial Conference of the Canadian Society for Biomechanics (pp. 106-107). London, Ontario: Spodym Publishers.

Bates, B.T., Davis, H.P. & **Dufek, J.S.** (1989). Court shoe evaluation during landings. Proceedings of the 13th Annual American Society of Biomechanics, (pp. 182-183). University of Vermont.

Dufek, J.S. (1989). The effects of landing on lower extremity function (abstract), ISB Newsletter, 35, p. 10.

Dufek, J.S. & Bates, B.T. (1989). Models incorporating height, distance and landing technique to predict impact forces. Proceedings of the 12th International Congress of Biomechanics, abstract #15. University of California-Los Angeles.

Dufek, J.S., Schot, P.K. & Bates, B.T. (1989). Joint mechanical powers of the lower extremity during walking and running. Proceedings of the 13th Annual American Society of Biomechanics, (pp. 114-115). University of Vermont.

Schot, P.K., **Dufek, J.S.** & Bates, B.T. (1989). Lower extremity moments of force during three gait conditions. Proceedings of the 12th International Congress of Biomechanics, abstract #94. University of California-Los Angeles.

Bates, B.T., **Dufek, J.S.** & Davis, H.P. (1990). The effect of sample and trial sizes on statistical power/results. Human Locomotion VI, Proceedings of the Sixth Biennial Conference of the Canadian Society for Biomechanics, (pp. 63-64). Quebec City, Quebec, Canada.

Dufek, J.S. & Bates, B.T. (1990). Regression models for predicting impact forces and knee joint moments and powers during landings. Human Locomotion VI, Proceedings of the Sixth Biennial Conference of the Canadian Society for Biomechanics, (pp. 55-56). Quebec City, Quebec, Canada.

Dufek, J.S. & Bates, B.T. (1990). The relationship between maximum ground reaction forces and lower extremity extensor joint moments during landing. Proceedings of the 14th Annual American Society of Biomechanics, (pp. 205-206). University of Miami.

Dufek, J.S. & Bates, B.T. (1991). Neurons, skills and toys. In E. Zemper, G. Steigelman and S. James (Eds.), Sport Science Symposium: Proceedings from the VIIIth World Veterans' Championships, (pp. 15-18). Eugene, Oregon: University of Oregon Printing Services.

Dufek, J.S., Caster, B.L. & Bates, B.T. (1991). Evaluation of position constraints on landing performance. Proceedings of the 15th Annual American Society of Biomechanics, (pp. 226-227). Arizona State University.

Schot, P.K., **Dufek, J.S.** & Bates, B.T. (1991). Individual joint contributions to shock absorption during vertical drop landings. Proceedings of the 15th Annual American Society of Biomechanics, (pp. 224-225). Arizona State University.

Bates, B.T. & **Dufek, J.S.** (1992). Three-dimensional analysis of barcode scanning. Technical Report, Spectra-Physics, Inc.

Caster, B.L., Bates, B.T. & **Dufek, J.S.** (1992). A multi-dimensional assessment of the functionality of cross training athletic footwear. Proceedings of NACOB II, The Second North American Congress on Biomechanics, (pp. 275-276). Chicago: Organizing Committee.

Dufek, J.S. (1992). Application of the joint moment of force parameter to research in the movement sciences. Research Quarterly for Exercise and Sport, 63, A-17.

Dufek, J.S. & Bates, B.T. (1992). Performance and variable assessment models for landings. Proceedings of the 8th Meeting of the European Society of Biomechanics, (p. 328). Coni-Scuola dello Sport, Rome.

Dufek, J.S., Derrick, T.R. & Bates, B.T. (1992). Variability of two types of landings. Proceedings of NACOB II, The Second North American Congress on Biomechanics, (pp. 551-552). Chicago: Organizing Committee.

James, R., **Dufek, J.S.** & Bates, B.T. (1992). Effects of fatigue on mechanical and muscular components of drop landings. Proceedings of NACOB II, The Second North American Congress on Biomechanics, (pp. 553-554). Chicago: Organizing Committee.

Dufek, J.S., Caster, B.L. & James, R. (1993). Relationships among initial body positions and implied joint stiffness on landing impact forces and muscular activity. Proceedings of the 13th International Congress of Biomechanics, (pp. 364-365). Paris: Organizing Committee.

Dufek, J.S. & Schot, P.K. (1993). Identification of variable types for prediction of impact forces. Research Quarterly for Exercise and Sport, 64, A-19.

Bates, B.T., Zhang, S., **Dufek, J.S.** & Chen, F. (1994). The effects of sample size and variability on the correlation coefficient. Proceedings, Eighth Biennial Conference, Canadian Society for Biomechanics, (pp. 292-293). Calgary: Organizing Committee.

Caster, B.L., Chen, F.C., **Dufek, J.S.** & Bates, B.T. (1994). Single subject design in biomechanics research: Justification of statistical assumptions. Proceedings, Eighth Biennial Conference, Canadian Society for Biomechanics, (pp. 294-295). Calgary: Organizing Committee.

Dufek, J.S. & James, C.R. (1994). Modeling landing impacts. Proceedings, Eighth Biennial Conference, Canadian Society for Biomechanics, (pp. 176-177). Calgary: Organizing Committee.

Zhang, S., **Dufek, J.S.** & Bates, B.T. (1994). Viability of bootstrap techniques in biomechanics research. Proceedings, Eighth Biennial Conference, Canadian Society for Biomechanics, (pp. 310-311). Calgary: Organizing Committee.

Zhang, S., Bates, B.T. & **Dufek, J.S.** (1996). Selected knee joint forces during landing activities. Proceedings, American Society of Biomechanics Annual Meeting. Atlanta: Organizing Committee.

Mercer, J.A., Kindling, L.A. Arata, A.W., Hreljac, A., **Dufek, J.S.** & Bates, B.T. (1998). The effect of the quadriceps and hamstring fatigue during running. Proceedings of NACOB III, The Third North American Congress on Biomechanics. Waterloo: Organizing Committee.

Teramoto, K., **Dufek, J.S.**, & Mercer, J.A. (2006). The effect of local muscle fatigue on shock attenuation for female runners. Proceedings, American Society of Biomechanics Annual Meeting: abstract #144. Blacksburg, VA.

Aldridge, J.A., Melcher, G.G., Mercer, J.A. & **Dufek, J.S.** (2009). Exploration of a novel task for improvement of balance in older adults. Medicine and Science in Sports and Exercise, 41(5):s219.

Forrest, D.M., **Dufek, J.S.**, Masumoto, K., & Mercer, J.A. (2009). Muscle activity during running at reduced body weight. Medicine and Science in Sports and Exercise, 41(5):s513.

Whitely, C.R. & **Dufek, J.S.** (2009). The effect of retro locomotion on flexibility of the low back and hamstrings. *Medicine and Science in Sports and Exercise*, 41(5):s358.

Dufek, J.S., Mercer, J.A., Aldridge, J.M., Melcher, G.G. & Gouws, P-L. (2009). Effects of backward walking on balance and lower extremity walking kinematics in healthy young and older adults. Proceedings, American Society of Biomechanics Annual Meeting: abstract #1022. State College, PA.

Dufek, J.S., House, A.J., Mangus, B.C., Mercer, J.A. & Melcher, G.G. (2010). Effects of backward walking as a modality for low back pain reduction in athletes. Proceedings of the XXVIIIth International Society of Biomechanics in Sports Conference (R. Jensen, Ed.), pp. 289-294. Northern Michigan University, Marquette, MI.

Neumann, E.S., **Dufek, J.S.** & Hawkins, C. (2010). Kinematic and kinetic outcomes of Helios use among eight CMT subjects. Report submitted to the Hereditary Neuropathy Foundation and Ortho Rehab Designs, 75 pages.

INVITED PRESENTATIONS

Neurons, skill and toys. World Veteran's Games Sport Science Symposium, Eugene, Oregon, July 1989.

Biomechanics: State of the art/science. Northwest Regional American College of Sports Medicine Annual Meeting, Spokane, Washington, February 1991.

Biomechanical comparison of land and water running. User's Group Meeting, Ariel Life Systems, Inc., La Jolla, California, May 1992.

Dynamic landing activities: Understanding injury and performance mechanisms. Western College Physical Education Society, Reno, Nevada, October 1992.

Biomechanics in the clinic: Needs and applications. Second Annual Symposium on Pathomechanical Conditions of the Human Body, New Orleans, Louisiana, January 1993.

Landing impacts: An invitation for injury? Examination of modeling techniques. Biomechanics Academy; American Alliance for Health, Physical Education, Recreation and Dance Annual Convention, Washington, D.C., March 1993.

Lower extremity function during landing. National Athletic Trainers' Association Annual Convention, Kansas City, Missouri, June 1993.

Biomechanics: What is it?! High School Student Assembly, Ashland Public School System, Ashland, Wisconsin, December 1993.

Clinical quantification: Overview of foot pressure systems and technology. Third Annual Symposium on Pathomechanical Conditions of the Human Body, New Orleans, Louisiana, January 1994.

Human variability: Confusing? Confounding? Constraining?. Symposium Presentation at American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, June 1994.

Status of research in biomechanics: Issues of design and methodology. Research Consortium Newsletter (invited manuscript), January 1995.

Triplanar pathomechanics of the lower limb. American Physical Therapy Association Annual Meeting, San Diego, California, June 1997.

The 'Hows' and 'Whys' of Single Subject Analysis (with B.T. Bates, J.A. Mercer & N. Stergiou). American Society of Biomechanics Annual Meeting Tutorial, Chicago, Illinois, July 2000.

Single Subject Analysis Techniques. Biomechanics Invitational Symposium, University of Nevada, Las Vegas, Las Vegas, Nevada, February 2001.

I Run, I Jump, I Hurt: Biomechanical Implications of Impact Activities. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, California, November 2007.

Too Much Exercise? Biomechanics of Walking the Injury Tight Rope. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, California, November 2008.

PEER REVIEWED PRESENTATIONS

Dufek, J.S. & Fenton, R.M. Electrodynamogram force analysis in cross-country skiing. Second International Symposium on Biomechanics in Sports, Colorado Springs, Colorado, January 1984.

Simpson, K.J., **Dufek, J.S.** & DeVita, P. Computer graphics in biomechanics. Pacific Northwest Computer Graphics Conference, Eugene, Oregon, October 1984.

Dufek, J.S. & Bates, B.T. Temporal gait characteristics of cross-country skiers. Xth International Congress of Biomechanics, Umea, Sweden, June 1985.

Dufek, J.S., Simpson, K.J. & Wiese, D.M. The effect of overground and treadmill walking on selected temporal and kinetic measurements: a pilot study. Northwest Regional American College of Sports Medicine Annual Meeting, Portland, Oregon, April 1987.

Bates, B.T., McCaw, S.T. Simpson, K.J. & **Dufek, J.S.** Intraday variability of two measurement systems. XIth International Congress of Biomechanics, Amsterdam, The Netherlands, June 1987.

Dufek, J.S., Wiese, D.M. & Bates, B.T. The effect of velocity on in-boot forces for the cross-country ski diagonal stride. 11th Annual American Society of Biomechanics Meeting, Davis, California, September 1987.

Bates, B.T., McCaw, S.T., **Dufek, J.S.** & Simpson, K.J. Interday variability of two measurement systems. IEEE Engineering in Medicine and Biology Conference, Boston, Massachusetts, November 1987.

Dufek, J.S. & Wiese, D.M. A practical solution to variable selection in biomechanics. Northwest Regional American College of Sports Medicine Annual Meeting, Coure d'Alene, Idaho, February 1988.

Wiese, D.M., **Dufek, J.S.** & McCaw, S.T. The effect of three backpack weightloads on temporal and kinetic factors during level walking. Northwest Regional American College of Sports Medicine Annual Meeting, Coure d'Alene, Idaho, February 1988.

Dufek, J.S., Bates, B.T. & Geier, P.E. Foot pressure and temporal patterns in overground and treadmill walking. American Alliance for Health, Physical Education, Recreation and Dance National Convention, Kansas City, Missouri, April 1988.

Simpson, K.J., **Dufek, J.S.**, Abendroth-Smith, J. & Bates, B.T. Determination of gait asymmetry using an in-shoe pressure system. American Alliance for Health, Physical Education, Recreation and Dance National Convention, Kansas City, Missouri, April 1988.

Schot, P.K. & **Dufek, J.S.** Lower extremity moments of force during walk, transition and run. Northwest Regional American College of Sports Medicine Annual Meeting, Blaine, Washington, February 1989.

Dufek, J.S. & Bates, B.T. Impact forces during landings. American Alliance for Health, Physical Education, Recreation and Dance National Convention, Boston, Massachusetts, April 1989.

Dufek, J.S. & Bates, B.T. Models incorporating height, distance and landing technique to predict impact forces. XIIth International Congress of Biomechanics, Los Angeles, California, June 1989.

Schot, P.K., **Dufek, J.S.** & Bates, B.T. Lower extremity moments of force during three gait conditions. XIIth International Congress of Biomechanics, Los Angeles, California, June 1989.

Dufek, J.S. & Bates, B.T. Neurons, skills and toys. Sport Science Symposium of the VIII World Veterans' Track and Field Championships, Eugene, Oregon, July 1989.

Bates, B.T., Davis, H.P. & **Dufek, J.S.** Court shoe evaluation during landings. 13th Annual American Society of Biomechanics Meeting, Burlington, Vermont, August 1989.

Dufek, J.S., Schot, P.K. & Bates, B.T. Joint mechanical powers of force during walking and running. 13th Annual American Society of Biomechanics Meeting, Burlington, Vermont, August 1989.

Schot, P.K., **Dufek, J.S.** & Bates, B.T. Comparison of lower extremity joint kinetics during locomotion: Walking versus power walking. Northwest Regional American College of Sports Medicine Annual Meeting, Portland, Oregon, February 1990.

Dufek, J.S., Schot, P.K. & Bates, B.T. Lower extremity moments of force during landings. American College of Sports Medicine Annual Conference, Salt Lake City, Utah, May 1990.

Bates, B.T., **Dufek, J.S.** & Davis, H.P. The effects of sample and trial sizes on statistical power/results. Sixth Biennial Conference of Canadian Society for Biomechanics, Quebec, Canada, August 1990.

Dufek, J.S. & Bates, B.T. Regression models for predicting impact forces and knee joint moments and powers during landings. Sixth Biennial Conference of Canadian Society for Biomechanics, Quebec, Canada, August 1990.

Schot, P.K., **Dufek, J.S.** & Caster, B.L. Evaluation of bilateral symmetry of vertical ground reaction forces during drop landings. First World Congress of Biomechanics, La Jolla, California, August 1990.

Dufek, J.S., Caster, B.L. & Bates, B.T. The relationship between maximum ground reaction forces and lower extremity extensor joint moments during landing. 14th Annual American Society of Biomechanics Meeting, Miami, Florida, November 1990.

Caster, B.L., Bates, B.T. & **Dufek, J.S.** Mechanical and neuromuscular control components of impact activities. Northwest Regional American College of Sports Medicine Annual Meeting, Spokane, Washington, February 1991.

Chen, F.C., **Dufek, J.S.** & Bates, B.T. A comparison of massage and accupressure treatments on muscle relaxation and recovery rate. Northwest Regional American College of Sports Medicine Annual Meeting, Spokane, Washington, February 1991.

Dufek, J.S. Integrating biomechanics and motor control/learning. Kinesiology Academy Symposium, American Alliance for Health, Physical Education, Recreation and Dance National Convention, San Francisco, California, April 1991.

Dufek, J.S., Caster, B.L. & Bates, B.T. Evaluation of position constraints on landing performance. 15th Annual American Society of Biomechanics Meeting, Tempe, Arizona, October 1991.

Schot, P.K., **Dufek, J.S.** & Bates, B.T. Individual joint contributions to shock absorption during vertical drop landings. 15th Annual American Society of Biomechanics Meeting, Tempe, Arizona, October 1991.

Griffin, L.A., **Dufek, J.S.** & Bates, B.T. Methods and instrumentation in water research. XIIIth International Congress on Biomechanics, Perth, Australia, December 1991.

Chen, F.C. & **Dufek, J.S.** The effects of two different stepper machines on selected kinematic variables. Northwest Regional American College of Sports Medicine Annual Meeting, Seattle, Washington, February 1992.

Zhang, S. & **Dufek, J.S.** Characteristics of selected kinematic and kinetic variables during jumping. Northwest Regional American College of Sports Medicine Annual Meeting, Seattle, Washington, February 1992.

Dufek, J.S. Application of the joint moment of force parameter to research in the movement sciences. Research Consortium Symposium, American Alliance for Health, Physical Education, Recreation and Dance National Convention, Indianapolis, Indiana, April 1992.

Dufek, J.S. & Bates, B.T. Performance and variable assessment models for landing. European Society of Biomechanics, Rome, Italy, June 1992.

Griffin, L.A., **Dufek, J.S.** & Bates, B.T. A biomechanical comparison of running between media. Xth International Symposium of Biomechanics in Sports, Milan, Italy, June 1992.

Caster, B.L., Bates, B.T. & **Dufek, J.S.** A multi-dimensional assessment of the functionality of cross training athletic footwear. NACOB II: Second North American Congress on Biomechanics, Chicago, Illinois, August 1992.

Dufek, J.S., Derrick, T.R. & Bates, B.T. Variability of two types of landings. NACOB II: Second North American Congress on Biomechanics, Chicago, Illinois, August 1992.

James, R., **Dufek, J.S.** & Bates, B.T. Effects of fatigue on mechanical and muscular components of performance during drop landings. NACOB II: Second North American Congress on Biomechanics, Chicago, Illinois, August 1992.

Chen, F.C. & **Dufek, J.S.** Comparison of normal and pathological walking using center of pressure and strike indexes. Northwest Regional American College of Sports Medicine Annual Meeting, Eugene, Oregon, February 1993.

James, R., **Dufek, J.S.** & Bates, B.T. Effects of fatigue on lower extremity performance models during drop landings. Northwest Regional American College of Sports Medicine Annual Meeting, Eugene, Oregon, February 1993.

Ober, K.M., Combs, C.M. & **Dufek, J.S.** Biomechanical analysis of joint flexibility in arthritic subjects participating in an exercise program. Northwest Regional American College of Sports Medicine Annual Meeting, Eugene, Oregon, February 1993.

Ouellette, M.J., Chen, F.C. & **Dufek, J.S.** Stair height and its effect on center of pressure. Northwest Regional American College of Sports Medicine Annual Meeting, Eugene, Oregon, February 1993.

Zhang, S., **Dufek, J.S.** & Bates, B.T. Jump height prediction using biomechanical performance characteristics. Northwest Regional American College of Sports Medicine Annual Meeting, Eugene, Oregon, February 1993.

Dufek, J.S. & Schot, P.K. Identification of variable types for prediction of impact forces. American Alliance of Health, Physical Education, Recreation and Dance Annual Convention, Washington, D.C., March 1993.

Chen, F.C., Bates, B.T. & **Dufek, J.S.** Using the strike index in gait analysis. East Coast Gait Conference, Rochester, Minnesota, May 1993.

Bates, B.T., **Dufek, J.S.** & Davis, H.P. Relationship between sample size, data reliability, effect size and subject variability. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 1993.

Dufek, J.S. Landing models for elite athlete performances across a competitive season. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 1993.

James, R., **Dufek, J.S.** & Bates, B.T. Effects of fatigue on lower extremity performance models during drop landings. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 1993.

Zhang, S., **Dufek, J.S.** & Bates, B.T. Jump height prediction using biomechanical performance characteristics. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 1993.

Dufek, J.S., Caster, B.L. & James, R. Relationships among initial body positions and implied joint stiffness on landing impact forces and muscular activity. XIVth International Society of Biomechanics Congress, Paris, France, July 1993.

James, C.R., **Dufek, J.S.** & Bates, B.T. Fatigue accommodation during landing. Northwest Regional American College of Sports Medicine Annual Meeting, Boise, Idaho, February 1994.

Zhang, S., **Dufek, J.S.**, Albert, S. & Chen, F.C. Longitudinal study of a diabetes mellitus patient using an insole pressure system. Northwest Regional American College of Sports Medicine Annual Meeting, Boise, Idaho, February 1994.

Combs, C.M., **Dufek, J.S.**, Bates, B.T. & Davis, H.P. Object manipulations in an occupational setting. American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, June 1994.

Dufek, J.S., Bates, B.T., Caster, B.L., McCaw, S.T. & Schot, P.K. Human performance repeatability: A random model?. American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, June 1994.

James, C. R., **Dufek, J.S.** & Bates, B.T. Muscular and mechanical accommodation to fatigue. American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, June 1994.

Zhang, S., **Dufek, J.S.**, Albert, S. & Chen, F.C. Longitudinal study of a diabetes mellitus patient using an insole pressure system. American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, June 1994.

Bates, B.T., Zhang, S., **Dufek, J.S.** & Chen, F.C. The effects of sample size and variability on the correlation coefficient. Canadian Society for Biomechanics VIIIth Biennial Conference, Calgary, Alberta, August 1994.

Caster, B.L., Chen, F.C., **Dufek, J.S.** & Bates, B.T. Single subject design in biomechanics research: Justification of statistical assumptions. Canadian Society for Biomechanics VIIIth Biennial Conference, Calgary, Alberta, August 1994.

Dufek, J.S. & James, R. Landing impact models. Canadian Society for Biomechanics VIIIth Biennial Conference, Calgary, Alberta, August 1994.

Zhang, S., **Dufek, J.S.** & Bates, B.T. Viability of bootstrap techniques in biomechanics research. Canadian Society for Biomechanics VIIIth Biennial Conference, Calgary, Alberta, August 1994.

James, C.R. & **Dufek, J.S.** Comparison of muscular activity and mechanical constraints for prediction of landing impact forces. American College of Sports Medicine Annual Meeting, Minneapolis, Minnesota, June 1995.

Zhang, S. & **Dufek, J.S.** Evaluation of playing experience on volleyball block-jump performance. American College of Sports Medicine Annual Meeting, Minneapolis, Minnesota, June 1995.

Krasnow, D.H., Chatfield, S.J., Barr, S., Jensen, J.L. & **Dufek, J.S.** Imagery and conditioning practices for dancers. International Association for Dance Medicine and Science, Tel-Aviv, Israel, June 1995.

Bates, B.T. & **Dufek, J.S.** Lower extremity function during running and landing. International Conference for Women, Alexandria, Egypt, October, 1995.

Bates, B.T., **Dufek, J.S.** & Zhang, S. Landing models: Evaluation of elite volleyball players. International Conference for Women, Alexandria, Egypt, October, 1995.

Crussemeyer, J., Ludwick, G., Dasho, J. & **Dufek, J.** Step aerobics: Power or not? Northwest Regional American College of Sports Medicine Annual Meeting, Corvallis, Oregon, February, 1996.

Kean, J., Crussemeyer, J., & **Dufek, J.** Do people understand lifting? Northwest Regional American College of Sports Medicine Annual Meeting, Corvallis, Oregon, February, 1996.

Mercer, J., Adams, T., & **Dufek, J.** Effectiveness of a triplanar rigid ankle orthosis: A case study. Northwest Regional American College of Sports Medicine Annual Meeting, Corvallis, Oregon, February, 1996.

Kean, J., Crussemeyer, J., & **Dufek, J.** Do people understand lifting? Northwest Regional American College of Sports Medicine Annual Meeting, Corvallis, Oregon, February, 1996.

Mercer, J., Adams, T., & **Dufek, J.** Effectiveness of a triplanar rigid ankle orthosis: A case study. Northwest Regional American College of Sports Medicine Annual Meeting, Corvallis, Oregon, February, 1996.

James, C.R., **Dufek, J.S.** & Bates, B.T. Effects of overuse injury proneness on joint kinetic variability during landing. American College of Sports Medicine Annual Meeting, Cincinnati, Ohio, May 1996.

Zhang, S., **Dufek, J.S.** & Bates, B.T. Mechanical demands on the knee joint during landing activity. American College of Sports Medicine Annual Meeting, Cincinnati, Ohio, May 1996.

Dufek, J.S., Mercer, J.A., Fish, D., Kosta, C.S. & Fish, D. Efficacy of a tri-planar rigid AFO for walking: A case study. Canadian Society for Biomechanics Biennial Meeting, Vancouver, British Columbia, August 1996.

Zhang, S., Bates, B.T., & **Dufek, J.S.** Selected knee joint forces during landing activities. American Society of Biomechanics Annual Meeting, Atlanta, Georgia, October 1996.

Zhang, S, Bates, B.T. & **Dufek, J.S.** Regulation of lower extremity stiffness during landings. American College of Sports Medicine Annual Meeting, Denver, Colorado, May 1997.

Crussemeyer, J.A., Fish, D.J. & **Dufek, J.S.** Load bearing relief and PTBO Applications. American Physical Therapy Association Scientific Meeting and Exposition, San Diego, California, June 1997.

Dufek, J.S., Fish, D.J. & Kosta, C.S. Effects of orthotic intervention and gait training on muscle activity: A follow-up case study. American Physical Therapy Association Scientific Meeting and Exposition, San Diego, CA, June 1997.

Mercer, J.A., **Dufek, J.S.**, Kosta, C.S. & Fish, D.J. Metabolic cost of walking with a rigid, rotational control AFO. American Physical Therapy Association Scientific Meeting and Exposition, San Diego, California, June 1997.

James, C.R., Bates, B.T. & **Dufek, J.S.** Comparison of right vs. left leg GRF landing symmetry for healthy and overuse injury-prone recreational athletes. International Society of Biomechanics in Sports Annual Meeting, Denton, Texas, July 1997.

Mercer, J.A., James, C.R., Zhang, S., **Dufek, J.S.** & Bates, B.T. Single subject analysis of landing strategies. American College of Sports Medicine Annual Meeting, Orlando, Florida, June 1998.

Mercer, J.A., Kindling, L.A. Arata, A.W., Hreljac, A., **Dufek, J.S.** & Bates, B.T. The effect of the quadriceps and hamstring fatigue during running. Third North American Congress on Biomechanics, Waterloo, Canada, August 1998.

Clark-Donovan, S.M., Crusemeyer, J.A., **Dufek, J.S.** & Bates, B.T. Kinetic effects of a locked ankle joint via an ankle-foot orthosis during walking. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 1999.

Crusemeyer, J.A., **Dufek, J.S.** & Bates, B.T. Determination of variability in pronation curve behavior during running. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 1999.

Mercer, J.A., Hreljac, A., **Dufek, J.S.** & Bates, B.T. Peak leg and head accelerations during running following isolated quadriceps fatigue. American College of Sports Medicine Annual Meeting, Seattle, Washington, June 1999.

Mercer, J.A., **Dufek, J.S.** & Bates, B.T. Shock attenuation during running before and after a graded exercise test. XVIIIth International Congress of Biomechanics, Calgary, Canada, August 1999.

James, C.R., Bates, B.T. & **Dufek, J.S.** Evaluation of biomechanical response strategies for absorbing landing impacts. American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, June 2000.

Mercer, J.A., Hreljac, A., **Dufek, J.S.**, & Bates, B.T. Peak leg and head accelerations during running following isolated quadriceps fatigue. American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, June 2000.

Reid, M.N., Mercer, J.A., Mangus, B. & **Dufek, J.S.** Ground reaction force characteristics of a plyometric activity completed on different surfaces. Southwest Region of the American College of Sports Medicine Annual Meeting, San Diego, California, November 2000.

Reid, M.N., Mercer, J.A., **Dufek, J.S.**, & Mangus, B.C. Ground reaction force characteristics of a drop-jump performed barefoot and with shoes. American College of Sports Medicine Annual Meeting, Baltimore, Maryland, May 2001.

Gruenenfelder, A.R., Black, D., Mercer, J.A., & **Dufek, J.S.** Kinetic consequences to increased trunk mass during landing. American College of Sports Medicine Annual Meeting, San Francisco, California, May 2003.

Griffin, J., **Dufek, J.S.**, & Mercer, J.A. Shock attenuation characteristics of runners across three surface stiffnesses: A preliminary study. Southern California Student Meeting of the American Society of Biomechanics, Fullerton, California, April 2005.

Neumann, E., Mercer, J.A., DeLion, D., **Dufek, J.S.** & Griffin, J. Examination of prosthesis mal-alignment using motion capture. (Howard A. Thranhardt Lecture Honorarium Award Recipient). American Orthopedic and Prosthetic Association National Assembly, Las Vegas, NV, September 2005.

Griffin, J.R., **Dufek, J.S.**, Mercer, J.A., Teramoto, K., DeLion, D., & Bestwick, A. Lower extremity geometry as a predictor of shock attenuation during running. Southwest Regional American College of Sports Medicine Annual Meeting, Las Vegas, NV, November 2005.

Melcher, G., Griffin, J.R., Teramoto, K., **Dufek, J.S.** & Mercer, J.A. The effects of speed and surface on shock attenuation characteristics for male runners. Southwest Regional American College of Sports Medicine Annual Meeting, Las Vegas, NV, November 2005.

Teramoto, K., Griffin, J.R., **Dufek, J.S.** & Mercer, J.A. The effects of speed and surface on shock attenuation characteristics for female runners. Southwest Regional American College of Sports Medicine Annual Meeting, Las Vegas, NV, November 2005.

Griffin, J.R. **Dufek, J.S.**, Mercer, J.A., Teramoto, K. & DeLion, D. Surface variations alter the prediction of shock attenuation for female runners. American College of Sports Medicine Annual Meeting, Denver, CO, May 2006.

Teramoto, K., **Dufek, J.S.**, Mercer, J.A. & Mangus, B.C.. Impact variability among skilled volleyball players. American College of Sports Medicine Annual Meeting, Denver, CO, May 2006.

Tritsch, A.T., Mangus, B.C., **Dufek, J.S.**, Orzechowski, K.A. & Mercer, J.A. Application of isokinetic strength assessment to dynamic performance for female athletes. National Athletic Trainers Association Annual Meeting, Atlanta, GA, June 2006.

Teramoto, K., **Dufek, J.S.** & Mercer, J.A. The effects of local muscle fatigue on shock attenuation for female runners. American Society of Biomechanics Annual Meeting, Blacksburg, VA, September 2006.

Bhanot, K., Mercer, J.A. **Dufek, J.S.**, Freedman, J.A., House, A.J. & Griffin, J.R. Effect of change in running speeds on shock attenuation among children. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2006.

Freedman, J.A., **Dufek, J.S.** & Mercer, J.A. Shock attenuation characteristics in females across the lifespan. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2006.

Griffin, J.R., Mercer, J.S. & **Dufek, J.S.** Preliminary analysis of a kinematic comparison of running barefoot and in the Nike Free 5.0. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2006.

Freedman, J.A., **Dufek, J.S.** & Mercer, J.A. Footstrike patterns during barefoot running. American College of Sports Medicine Annual Meeting, New Orleans, LA, May 2007.

Griffin, J.R., Mercer, J.A. & **Dufek, J.S.** Kinematic comparison of running barefoot and in the Nike Free 5.0. American College of Sports Medicine Annual Meeting, New Orleans, LA, May 2007.

Bhanot, K., Mercer, J.A., **Dufek, J.S.**, Freedman, J.A., House, A.J. and Griffin, J.R. Effect of change in running speeds on shock attenuation among children. American College of Sports Medicine Annual Meeting, New Orleans, LA, May 2007.

Wulf, G., Granados, C. & **Dufek, J.S.** Increases in jump-and-reach height through an external focus of attention. North American Society for Psychology of Sport and Physical Activity Annual Meeting, San Diego, CA, June 2007.

Mercer, J.A., **Dufek, J.S.**, Bhanot, K., Freedman, J.A., House, A.J., Griffin, J.R., Rubley, M.D. & Mangus, B.C. Shock attenuation characteristics for children running on a treadmill and overground. National Athletic Trainers Association Meeting, Anaheim, CA, June 2007.

Tritsch, A.J., Rubley, M.D., **Dufek, J.S.**, & Mercer, J.A. Tibial rotation and valgus movement at the knee during cutting and stopping. National Athletic Trainers Association Meeting, Anaheim, CA, June 2007.

Melcher, G.G., House, A.J., Mangus, B.C. and **Dufek, J.S.** A novel exercise intervention to alleviate low back pain. Southwest Chapter of the American College of Sports Medicine, November 2007.

Tritsch, A.J. & **Dufek, J.S.** Functional change in jump height, knee laxity, and leg strength over a single season of play and training for female athletes. Far West Athletic Trainers Association Annual Meeting, San Francisco, CA, April 2008.

Bhanot, K., Mercer, J.A., Masumoto, K. & **Dufek, J.S.** Shock attenuation and impact characteristics for children running at different stride lengths. American College of Sports Medicine Annual Meeting, Indianapolis, IN, May 2008.

Mercer, J.A., **Dufek, J.S.**, Bhanot, K., Freedman, J.A, House, A.J, Aldridge, J., Rubley, M.D., & Mangus, B.C. Shock attenuation characteristics for children running. National Athletic Trainers Association Meeting, St. Louis, MO, June 2008.

Tritsch, A.J. & **Dufek, J.S.** Functional change in jump height, knee laxity, and leg strength over a single season of play and training for female athletes. National Athletic Trainers Association Meeting, St. Louis, MO, June 2008.

Wulf, G., **Dufek, J.S.**, Granados, C. & Pettigrew, C. An external focus of attention increases jump height. North American Society for the Psychology of Sport and Physical Education, Niagara Falls, Ontario, June 2008.

Freedman, J.S., **Dufek, J.S.** & Mercer, J.A. Kinetic characteristics of barefoot running. North American Congress of Biomechanics, Ann Arbor, MI, August 2008.

Aldridge, J.M., Melcher, G.G., Mercer, J.A. & **Dufek, J.S.** The effects of retro locomotion on balance in young and older adults: A pilot study. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2008.

Forrest, D., **Dufek, J.S.**, Masumoto, K. & Mercer, J.A. Knee flexion and extension muscle activity during running at simulated microgravity: A pilot study. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2008.

Gouws, P-L., Melcher, G.G., Aldridge, J.M. & **Dufek, J.S.** Efficacy of retro locomotion as a modality for the reduction of low back pain in athletes. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2008.

Liebenberg, J.N., Melcher, G.G., Aldridge, J.M. & **Dufek, J.S.** Does a retro walking training program influence kinetic and kinematic gait parameters for healthy individuals? Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2008.

Melcher, G.G., **Dufek, J.S.** & Mercer, J.A. Is there short term adaptation to a novel locomotor task? Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2008.

Whitley, C.R. & **Dufek, J.S.** The effect of retro locomotion on flexibility of the low back and hamstrings: A pilot study. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, November 2008.

Aldridge, J.M., Melcher, G.G., Mercer, J.A. & **Dufek, J.S.** The effects of retro locomotion on balance in young and older adults. American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009.

Forrest, D., **Dufek, J.S.**, Masumoto, K. & Mercer, J.A. Knee flexion and extension muscle activity during running at simulated microgravity. American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009.

Whitley, C.R. & **Dufek, J.S.** The effect of retro locomotion on flexibility of the low back and hamstrings. American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009.

Dufek, J.S., Mercer, J.A., Aldridge, J.M., Melcher, G.G. & Gouws, P-L. Effects of backward walking on balance and lower extremity walking kinematics in healthy young and older adults. American Society of Biomechanics Annual Meeting, College Park, PA, August 2009.

Aldridge, J.M., **Dufek, J.S.** Mercer, J.A. & Tandy, R.D. The effect of concurrent cell phone use and walking on gait characteristics. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, October 2009 (Student Presentation Award).

Gouws, P-L., Applequist, B.J. Liebenberg, J. & **Dufek, J.S.** Variability of lower extremity function in a runner presenting with knee joint pain: A case study. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, October 2009.

Liebenberg, J., Scharf, J., Forest, D., **Dufek, J.S.**, & Mercer, J.A. Muscle activity during running at reduced body weight. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, October 2009.

Dufek, J.S., House, A.J., Mangus, B.C., Mercer, J.A. and Melcher, G.G. Effects of backward walking as a modality for low back pain reduction in athletes. XXVIII International Symposium on Biomechanics in Sports, pp. 389-392. Marquette, MI, July 2010.

Applequist, B., Mercer, J.A. and **Dufek, J.S.** A pilot study of shock attenuation and body locale. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, October 2010.

Currie, R. Gouws, P-L., Gutierrez, A., Candela, L. and **Dufek, J.S.** Effects of speed and gender on spatio-temporal characteristics of walking in overweight/obese vs normal weight middle- and high school aged children. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, October 2010.

McClellan, J.R., Forrest, D.M., Neumann, E.S. and **Dufek, J.S.** Effects of a custom orthopedic brace on balance characteristics for Charcot-Marie-Tooth patients. Southwest Regional American College of Sports Medicine Annual Meeting, San Diego, CA, October 2010.

Liebenberg, J.N., **Dufek, J.S.**, Gouws, P-L., Mercer, J. & Wallmann, H. Kinetics at front foot contact of cricket bowling during a 10-over spell. 4th World Congress of Science and Medicine in Cricket, Chandigarh, India, March 2011 (to be presented).

Candela, L.C., Guierrez, A., **Dufek, J.S.**, Mercer, J.A. and Putney, L. Modifying the Diabetes Prevention Program to a school setting. Western Institute for Nursing Communicating Nursing Research Annual Conference, Las Vegas, NV, April 2011 (to be presented).

Roper, J.L., DeMattei, M., Santo, A., **Dufek, J.S.** and Mercer, J.A. Lower extremity muscle activity while walking in shape-up shoes. American College of Sports Medicine Annual Meeting, Denver, CO, May 2011 (submitted).

Santo, A., DeMattei, M. Roper, J., **Dufek, J.S.** and Mercer, J.A. Skecher Shape-Ups do not increase the metabolic cost of walking. American College of Sports Medicine Annual Meeting, Denver, CO, May 2011 (submitted).

UNIVERSITY TEACHING EXPERIENCE

PEP 371	Kinesiology (undergraduate)
PEP 468	Track & Field Coaching (undergraduate)
PEP 481	Sport Biomechanics (undergraduate/graduate)
SPE 100-200	Activity Physical Education Courses (undergraduate): jogging, 10K training, marathon training, aerobics, beginning weight training, fit-for-life, intermediate/advanced basketball, intermediate/advanced softball
EMS 103	Exercise and Performance (undergraduate)
EMS 381	Introductory Biomechanics (undergraduate)
EMS 405	Readings in Biomechanics (undergraduate)
EMS 407/507	Orthopedic Biomechanics (undergraduate/graduate)
EMS 407/507	Lower Extremity Biomechanics (undergraduate/graduate)
EMS 407/507	Impact Biomechanics (undergraduate/graduate)
EMS 407/507	Human Factors Biomechanics (undergraduate/graduate)
EMS 407/507	QuickBasic Computer Programming (undergraduate/graduate)
ESS 546	Biomechanics (graduate; Oregon State University)
EMS 607	Biomechanics Seminar (graduate)
EMS 607	Biomechanics Instrumentation Seminar (graduate)
EMS 682	Biomechanics II: Mechanics (graduate)
EMS 610	Statistical Methods Laboratory (graduate)
EMS 691	Statistical Methods (graduate)
KIN 346	Biomechanics (undergraduate)
KIN 411x	Advanced Biomechanics Seminar (undergraduate)
KIN 415/615	Forensic Kinesiology (undergraduate/graduate)
KIN 499/791	Introduction to Forensic Science: Human Performance (undergraduate/graduate)
KIN 736	Biomechanics (graduate)
KIN 743	Research Techniques in Biomechanics (graduate)
KIN 747	Biomechanics Seminar (graduate)
*PEP:	Professional Physical Education, College of Human Development & Performance, University of Oregon
*SPE:	Service Physical Education, College of Human Development & Performance, University of Oregon
*EMS:	Exercise & Movement Science, College of Arts & Science, University of Oregon
*ESS:	Exercise & Sport Science, College of Health & Human Performance, Oregon State University
*KIN:	Department of Kinesiology and Nutrition Sciences, School of Allied Health Sciences, University of Nevada, Las Vegas

PROFESSIONAL ORGANIZATIONS

American College of Sports Medicine; 1987-present
American Society of Biomechanics; 1987-present
Northwest Regional American College of Sports Medicine; 1987-2001
Southwest Regional American College of Sports Medicine; 2002-present

PROFESSIONAL SERVICE

Department, College, University:

Department (PEHMS): Undergraduate Physical Education Council; 1989-92.
Department (PEHMS): Affirmative Action Officer; 1990-91.
Department (PEHMS): Undergraduate Scholarship Committee; 1991-92.
Department (EMS): Computer Services Representative; 1991-95.
Department (EMS): Graduate Student Admissions Committee; 1991-95.
Department (EMS): Library Acquisitions Representative; 1991-95.
Department (EMS): Search Committee Member, Exercise Physiology; 1992, 1993.
Department (EMS): Acting Undergraduate Coordinator; Summer 1993.
Department (EMS): Undergraduate Coordinator; 1994-95.
College (HDP): Library Committee; 1989-91.
University (CAS): Faculty Senator; 1993-95.
University: Intercollegiate Athletic Committee; 1994-95.
University: General Science Advisory Committee; 1995.
Department (KIN): Faculty Sponsor for McNair Award Application (C. Whitley); 2008.
Department (KIN): Search Committee Member; 2010.
University: (Health Sciences): Priority and New Program Committee Member; 2010-2013.

Non-University:

Student Affairs Committee Regional Representative, American College of Sports Medicine; 1987-88.
Member-at-Large (Executive Board Member), Northwest Regional Chapter of the American College of Sports Medicine; 1989-1992.
Nominating Committee, Kinesiology Academy, American Alliance for Health, Physical Education, Recreation and Dance; 1991.
Working Group Member (Prospective Research Committee), Osteoporosis and Exercise. National Institutes of Health: Heart, Lung and Blood Institute; 1991.
Biomechanics Academy; American Alliance for Health, Physical Education, Recreation and Dance Annual Convention Abstract Reviewer; 1992.
Program Evaluation Committee Member, Research Consortium, American Alliance for Health, Physical Education, Recreation and Dance; 1992.
Invited Reviewer: Idaho State Board of Education Grant Program; 1992.
Section Editor, "Performance Excellence", Strategies; 1992-1995.

Program Co-Chair, Northwest Regional Chapter of the American College of Sports Medicine Annual Meeting; 1993.

President, Northwest Regional Chapter of the American College of Sports Medicine; 1993-94.

Western College Physical Education Young Scholar Award Committee; 1993.

Chair-Elect, Biomechanics Academy, American Alliance for Health, Physical Education, Recreation and Dance; 1994.

Minority Assistance Sub-Committee Member, American College of Sports Medicine, 1994.

Defense Women's Health Research Program Review Panel Member (via BioReview and American Institute of Biological Science), 1994.

National Aeronautics Space Administration Review Panel Member (via BioReview and American Institute of Biological Science), 1995.

American College of Sports Medicine Annual Meeting Abstract Reviewer; 1995, 1996.

Project Review Committee Member, American College of Sports Medicine; 1994-1997.

Regional Chapters' Representative (Northwest Region), American College of Sports Medicine; 1995-1997.

American Heart Association Volunteer; 1997-1999.

American College of Sports Medicine Certification Program Instructor, 1998, 1999.

Regional Chapters Representative (Northwest Region), American College of Sports Medicine; 1998-2001.

Executive Board Member, International Institute for Sport and Human Performance, 2000-2004.

Student Grant Committee Chair, Northwest Region of the American College of Sports Medicine; 2000.

Editorial Board Member, Health and Fitness Journal, 2001-2005.

Strategic Health Initiative: Women, Sport & Physical Activity Committee, American College of Sports Medicine, 2001-2004.

State of Oregon Chair, SHARES Membership Initiative, American College of Sports Medicine, 2001-2002.

Abstract Reviewer, Southwest Chapter of the American College of Sports Medicine, 2003.

Invited Reviewer: Idaho State Board of Education Grant Program; 2006.

Faculty-Student Mentor (G. Casebolt, Texas Women's University), American Society of Biomechanics Annual Meeting, 2006.

Educational DVD Participant, "Biomechanics", Castilia Media, 2006.

Abstract Reviewer: American Society of Biomechanics Annual Meeting, 2007.

Invited Reviewer: Nebraska Research Initiative, Biotechnology Section, 2006.

Invited Reviewer: Idaho State Board of Education: Research Center Grant FY 2008 Proposal, 2007.

Invited Reviewer: Nebraska Research Initiative, Biotechnology Section, 2008.

External Program Reviewer, Department of Physical Education and Exercise Science, Brooklyn College, Brooklyn, New York, 2009.

Invited Scholar-Facilitator: Women in Science Luncheon, American Society of Biomechanics Annual Meeting, 2009.

Faculty-Student Mentor (A. Sumner, Auburn University), American Society of Biomechanics Annual Meeting, 2009.

Expert Judge, *Recommendations for Biomechanics in Physical Education Teacher Education*, West Virginia University, 2010.

Review Editorial Board Member, *Frontiers in Movement Science and Sport Psychology*, 2010-2011.

Manuscript / Textbook Reviewer for:

Medicine and Science in Sports and Exercise; 1989- present
Prentice-Hall, Inc.; 1990, 1992, 1993
Dance Research Journal, (guest reviewer); 1992
Benjamin-Cummings Publishing Company; 1992
Lea & Febiger, Inc.; 1993
Williams & Wilkens; 1993, 1994
Journal of Applied Biomechanics; 1994-present
Research Quarterly for Exercise and Sport; 1994-1996, 2000-present
Brown and Benchmark Publishers, 1996
Health and Fitness Journal; 2001- present
Journal of Physical Medicine and Rehabilitation; 2006-present
Journal of NeuroEngineering and Medicine; 2006-present
Sports Medicine; 2006 -present
Wadsworth Publishing Company, 2006
Clinical Biomechanics; 2009-present
International Journal of Women's Health; 2009-present
Military Medicine; 2009-present
Journal of Sport Rehabilitation; 2010-present
Motor Control; 2010-present

HONORS and PROFESSIONAL RECOGNITION

Northwest Regional American College of Sports Medicine Student Presentation Award; 1987
Northwest Regional American College of Sports Medicine Student Presentation Award; 1988
Who's Who Among Rising Young Americans; 1990
Fellow, Research Consortium, American Alliance for Health, Physical Education, Recreation and Dance; 1991
Fellow, American College of Sports Medicine; 1991
Young Scholar Award, Western College Physical Education Society; 1992
Outstanding Service Award, Northwest Region, American College of Sports Medicine, 1999
Lydia T. Thering Meritorious Service Award: Hall of Fame, University of Wisconsin-Superior, 2007
Marquis Who's Who in America; 2010
Cambridge Who's Who, 2010-2011

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